Final Report of the
ONTARIO PEANUT TASK FORCE
submitted to

Ontario Ministry of Agriculture and Food

1985

Final Report of the
ONTARIO PEANUT TASK FORCE
submitted to

Ontario Ministry of Agriculture and Food

1985

TABLE OF CONTENTS

THE TASK FORCE

The Task Force was asked to investigate the current state of the Ontario peanut industry; to determine the long-term viability of peanuts as an industry in Ontario; and, if viable, to make recommendations to the Deputy Minister on the most appropriate ways the Ontario Ministry of Agriculture and Food could assist this fledgling industry.

Members of the Peanut Task Force are:

Dr. Rob McLaughlin (Chairman)
Director
Plant Industry Branch
Ontario Ministry of Agriculture and Food

Kevin Grier
Economics and Policy Coordination Branch
Ontario Ministry of Agriculture and Food

Gill Shaw
Food Processing Branch
Ontario Ministry of Agriculture and Food

Dr. J.W. Tanner
Chairman
Department of Crop Science
University of Guelph

Dr. Wade Johnson
Director
Delhi Research Station
Agriculture Canada

Mike Columbus (ex-officio)
Energy Specialist
Agriculture Energy Centre
Plant Industry Branch
Ontario Ministry of Agriculture and Food

RECOMMENDATIONS

The Peanut Task Force recommends that:

1. The Ontario Government not directly support further commercial development of the industry at this time.

2. The peanut breeding program be maintained at its current level for at least five years.

3. Agriculture Canada continue agronomic work in peanuts to increase yield and quality through work in pesticide screening, fertility, rotation and curing studies.

4. Agriculture Canada blueprint plans for the once-over peanut harvester.

5. A Peanut Crop Insurance Plan continue to be offered to growers as insurance against crop loss.

6. The defined peanut extension effort (0.25 professional man years) be dropped and that peanut extension be covered by Plant Industry Branch staff in the same manner as any other minor specialty crop.

7. For the 1985 crop and beyond, only in-store posting cards be produced and that these be made available to individual sheller-processors.

GLOSSARY OF TERMS

Additionals	-	Refers to peanuts produced by farmers in the United States over and above their allotted quota peanuts. Additionals produced are required to be sold for export only.
Farmer's Stock	-	Refers to peanuts in the shell that a farmer produces.
Jumbo	-	Refers to the largest sized kernels of particular market type of peanut.
LSK (Loose Shelled Kernels)	-	Loose shelled kernels found in Farmer Stock.
Medium	-	Refers to a peanut that falls between a screen size range as determined by the sheller for a particular type of peanut. (Medium runner must ride an 18/64 and fall through a 21/64 screen.)
Modified American Harvester	-	A multi-pass harvesting system whereby, with two or three passes, the peanut plants are topped, dug and inverted and then combined with a peanut combine modified to improve separation under Ontario conditions and minimize peanut damage and harvest losses.
Once-over Harvester	-	A harvesting machine that digs the peanut plant and strips the nuts from the plant in one operation.
Raw Stock	-	Refers to clean, shelled and graded raw peanuts that require further processing.
Runner and Virginia	-	Plants of these two market types belong to the botanical group *Arachis hypogaea* subspecies *hypogaea* variety *hypogae*. They have spreading (runner) to upright (erect bunch) growth habit, alternate branching, lack inflorescences in main stem leaf axils, possess appreciable fresh seed dormancy, flower longer and mature later than those of subspecies *fastigiata*. In the U.S. the distinction between two market types is an arbitrary one based on pod size and seed count. The Virginia type has larger pods and seeds.

(SMK) (Sound Mature Kernel) - Whole kernels that ride a specific screen size for the market type of peanut being graded.

Runner - 16/64"
Spanish & Valencia - 15/64"
Virginia (with 40% or more "fancy" size)
21.5/65" upper, 15/64" lower
Virginia (with less than 40% "fancy" size)
21.5/64" upper, 16/64" lower

Spanish - Plants belong to the botanical group Arachis hypogaea subspecies fastigiata variety vulgaris. Plants have upright growth habit, sequential branching, inflorescences in main stem axils, possess little fresh seed dormancy and have a shorter maturity than subspecies hypogaea. Commercial Spanish have two seeds per pod and flesh coloured seed testa.

Split - Refers to peanuts that have been broken into two halves.

Valencia - Plants belong to the botanical group Arachis hypogaea subspecies fastigiata variety fastigiata. They have upright growth habit, sequential branching, inflorescences in main stem axils, possess little fresh seed dormancy and have a shorter maturity than the subspecies hypogaea. Commercial Valencia have three to four seeds per pod and a wine coloured testa.

I. INTRODUCTION

The purpose of the Ontario Peanut Task Force was to determine the viability of the Ontario peanut industry. From March 1984 to March 1985, the Peanut Task Force met with a wide spectrum of people who participate, influence or contribute to the Ontario peanut industry. (Appendix A)

The Task Force believes that these meetings and resulting discussions provided a full scope of the industry and the factors that have or will impact upon its viability. This final report was the result of those meetings and the input of the task force members.

The report was divided into four general categories: production, marketing, U.S. situation and the economics of Ontario production. Each category is then subdivided into specific topics that were addressed by the task force. The task force believed that each of the topics has a significant bearing on the viability of the crop.

II. PRODUCTION

Historical Perspective

The interest in Ontario peanuts arose from preliminary experiments initiated by Dr. J.W. Tanner, University of Guelph in 1970. In that year, a few peanut cultivars were obtained from North Carolina for evaluation. The trial was conducted at the tobacco research station in Delhi. In subsequent years, research was expanded to include some agronomic studies (seed rates, seeding dates, row width etc.). Researchers Mr. J. Elliot and Mr. R. Roy joined Dr. Tanner's efforts at Delhi and Guelph. Based on trials from 1970-1973, it appeared that Spanish varieties could be grown in Canada at yields comparable to those in the U.S. On this basis, field scale trials were initiated. The inception of Agriculture Canada's New Crop Development Fund (NCDF) in 1974 contributed to a further expansion of research.

From 1974-76 a comparatively large scale research program was conducted. As a result of extensive effort involving field work and varietal screening, the Valencia type peanut was identified as being superior under Ontario conditions. Research efforts shifted in 1977-1978 to Valencia types.

NCDF assistance for peanut research was renewed in 1977 and 1978. Agriculture Canada, in conjunction with OMAF continued to support the program. By 1978, researchers had developed a production package and identified appropriate varieties which, despite continued excess harvest losses, they felt could yield farmers a ton per acre. (Research plot yields had been ranging from 2,400 to 4,900 lbs.) No facilities, however, were available for receiving (shelling, grading, marketing) peanut shipments.

During the 1977 to 1978 period, two firms approached the Provincial Government regarding financial support for the construction of shelling facilities. Neither proposal was deemed as acceptable. In 1980-1981 Mr. J. Picard established Picard Peanuts Limited. With financial assistance from the Provincial Government, Mr. Picard opened a shelling facility. This facility provided the necessary beginning in the establishment of a commercial industry. In 1982, Mr. E. Racz established Ontario's second shelling facility, Kernal Peanuts.

Throughout the late 1970's harvesting remained a significant problem. As such, a great deal of effort was devoted to developing an effective method of harvesting. The result of this effort on both private farms and the Delhi Station was the development of two harvesters and techniques. One was the "modified-American" which adopted the U.S. harvester to Ontario conditions. The other was the "once-over" harvester designed and constructed in 1979 by Peter White, then with the University of Guelph, now with Agriculture Canada, Delhi.

To gain a further historical perspective of the industry and its developments, three separate but important events which occurred in 1980, 1981 and 1982 can be examined.

In 1980, the year Mr. Picard opened the shelling plant, U.S. yields and production declined dramatically due to a drought in the southeast. This drove the price of imported peanuts up and provided an opportunity to market shelled Ontario peanuts. This drought and subsequent shortage distorted Ontario peanut growers' long run view of market and price possibilities for the future.

In 1981, the U.S. Farm Bill was brought into law outlining programs for the various commodities. The peanut program was changed such that only peanuts sold in the domestic market received price supports. Peanuts for export would now receive whatever price the market would bear. In effect, this meant that the landed price in Toronto was driven down significantly.

Finally, in 1982, the third year of commercial production, a severe frost hit the Delhi-Simcoe area. Production and yields of Ontario peanuts declined dramatically. The frost severely impeded any progress that had been forthcoming in commercial production.

Plant Agronomy and Breeding

Most agronomic production practices recommended were based on the work of Mr. R. Roy and Mr. P. White conducted over the last 10 years.

The agronomic production recommendations developed cover all aspects of peanut growing including seeding rates, seeding dates, row-width, weed control, inoculation, irrigation, pest control, harvesting time, etc. Research indicates that the potential area for peanut production is south of the Delhi Research Station. As a general statement based on research, it is felt that peanuts should only be grown on good tobacco soils in areas with 3000+ corn heat units. Given current peanut varieties, the recommended area for production is south of the Michigan Central Railway track. The track is just north of Alymer, Tillsonburg, Delhi and Simcoe. The area is bounded to the south by Lake Erie and to the east and west approximately by Vittoria and Port Stanley, respectively.

Plant breeding involves introduction, selection and hybridization. The purpose of introduction and selection is to bring in and evaluate as many lines as possible. The purpose of this process is to identify lines which may have potential to use directly as a variety and lines which may represent parental material for the hybridization program. The University of Guelph program has researched and evaluated germplasm lines and varieties from across the world in seeking to develop a peanut suitable for the Ontario environment.

One of the many characteristics researchers have attempted to select for included cold hardiness. Early emergence was another attribute that was considered important. Experiments during the mid-1970's identified lines likely to emerge under Ontario's cooler spring soil temperatures. Early emerging peanut lines have been used on the vast majority of crosses made in the University of Guelph program.

As a result of these tests and requirements, it was determined that the best possible peanut type for Ontario conditions was the Valencia.

Since the late 1970's, there has been essentially two Valencia varieties grown commercially in Ontario, McRan and OAC Garroy. Researchers generally believe that Garroy represents the best variety for production under Ontario conditions as it yields approximately 20% more per acre than McRan.

Garroy, however, was developed through lines and varieties bred and adopted elsewhere. Dr. Michaels, who has been leading the Guelph program since 1982 has been developing "made in Ontario" varieties. These varieties should be even more uniquely adaptable to Ontario conditions as their parents have been selected here based on their performance. Dr. Michael's current objectives involve higher yield, increased oil, excellent flavour, earlier maturity, increased spring vigor, larger seed size, more uniform seed shape, and flesh-colored seed coats. Dr. Michaels has in fact recently identified one potential cultivar yielding 14% more than OAC Garroy and another with 11% greater kernel size. The program at Guelph looks to continued advances in yield potential and seed size as major goals.

Harvesting

Harvesting has been one of the major impediments to the growth and development of the industry. Traditional harvesting systems used in the primary growing areas of the United States are not suitable to Ontario's severe climatic conditions at harvest. In Ontario, peanuts must be combined and removed from the field on the same day to avoid the risk of overnight frost. Harvesting problems are compounded by the fact that the optimum harvest period is limited to three weeks commencing about the 20th day of September through to the 10th day of October. Harvesting after this period, generally results in increased harvest loss and reduced quality due to agronomic and climatic reasons.

A great deal of controversy exists among industry participants as to the most efficient approach. This controversy is especially pertinent as harvesting is a major component of operating costs. From 1982 onward growers have essentially been divided between a modified United States digger-inverter-thresher multipass system and a self-propelled or tractor-mounted once-over system.

Over the last six years Mr. Peter White has developed a tractor-mounted, one row, once-over harvester. This machine harvests up to three acres per 10-hour day. When adjusted to suit field and climatic conditions, the machine has few mechanical problems, losses are minimal and peanuts are reasonably free of soil and debris.

Machinery manufacturers in the Delhi-Simcoe area have been attempting to develop harvesters based on the White prototype. Two companies have received federal funding to offset some development costs. The harvesters developed

range from one row to four row machines. To date however there has been very little progress in the development of an effective commercial once-over harvester. Frequent break down and debris problems are most often cited. Individual farmers have also tried their hands at the development of a once-over harvester.

Most estimate the costs of a once-over harvester at around $15,000 for a one row, $25,000 for a two row and $40,000 for a four row. It must be noted that the once-over should be considered as still in the prototype stage.

The "modified American" system involves flail chopping to eliminate foliage from plugging the combine. Diggers are then used to lift the peanuts. Finally to prevent the risk of overnight frost, a third pass using a combine threshes the peanut pods off the vines. In 1984, the system discontinued the flail chopping and settled on a two pass system.

There are two diggers available: a three row model which retails for $6,000 and a six row which retails for approximately $20,000. The six row model is capable of handling up to 25 acres per day. A suitable combine for threshing would sell for approximately $25,000.

Drying and Handling

Drying peanuts is another major cost to the producer. In Ontario, during the harvest season, field drying is not attempted due to the risk of overnight frost. Thus, the peanut pods, which are harvested at 50 - 70% moisture content, must be dried artificially over a period of 4-6 days to a safe storage content of 10%. As with harvesting, there are two methods used.

Certain existing tobacco curing structures can be used effectively for peanut drying with minor modifications. Using these bulk tobacco kilns eliminates the need for high capital expenditures for specialized drying equipment. The Ontario Government has funded studies in 1982 and 1983 to determine the relative efficiencies of various kiln drying systems. Depending upon type of fuel used, methods employed and type of kiln, costs of drying ranged from 2.5¢ to 11.0¢ per pound.

The traditional United States type of drying is the other generally used system. This method employs specialized equipment requiring a substantial capital investment. This specialized equipment is composed of a wagon capable of holding 3.3 tons of peanuts, fuel and electrical hook-ups, blower and burner components and shelter.

Crop Insurance

At the request of a small group of growers led by Mr. E. Racz, OMAF instituted a crop insurance plan for the 1982 crop. The type of plan offered is known as a Field Adjustment Insurance Plan which is similar to that offered for field vegetable crops. This type of plan calls for preharvest field sampling to determine yields.

There is a great deal of grower discontent associated with many aspects of the program. Much of the dissatisfaction centres on the preharvest sampling requirement as apposed to the "average farm yield" system used for other field crops. Sampling technique is also a point of contention.

Under the current field adjustment system, field sampling is felt to be overly subjective. On-sight crop observation intended to determine uniformity of the crop, number of samples to be taken and sampling site is seen as leaving too much room for error. Visual assessment of peanut top growth is not regarded as a reliable indication of growth below ground.

Extension

Growers, researchers, machinery manufacturers, shellers and processors all identified a need for an increased extension effort in peanuts.

In general, it is perceived that Agriculture Canada's mandate is one of research. Extension is an OMAF responsibility. The small size of the crop and the number of growers made it difficult to justify any peanut extension designation within OMAF. Much of the extension work has been carried out by Mr. R. Roy and Mr. P. White from Agriculture Canada's Delhi Station. For a variety of reasons, not the least of which is time constraints, this situation has proven difficult to administer. As such, in the fall of 1984, OMAF instructed two members of the Plant Industry Branch, Mr. M. Columbus and Mr. D. Van Hooren, to devote time to the extension effort. In addition, Agriculture Canada staff continued to make on-farm visits on a more limited basis.

Shelling

There are two shellers in Ontario. Each has the capacity to handle approximately 5,000 tons per year. Picard Peanuts of Windham Centre has a fully equipped plant. In addition, to the sheller, this system includes cleaning, grading, sorting and storage capabilities. This facility was constructed with provincial government assistance through the Board of Industrial Leadership and Development program and an Ontario Development Corporation (ODC) interest free loan. Kernel Peanuts of Vittoria, has an older sheller which originally was used in the University of Guelph research program. The system lacks cleaning, grading and sorting equipment and can be best described as makeshift.

Excessive amounts of dirt, trash and stones have slowed the shelling process and added cost. Both shellers agreed that a more timely harvest and a better job of removing foreign material in the field would drastically improve efficiency and costs.

Despite the fact that Mr. Picard has gravity tables and electric eyes for sorting, hand picking is required and represents a sizeable portion of operating costs. Kernel Peanuts, lacking the necessary equipment, has had difficulty producing a product of acceptable quality for the processing industry.

Mr. Racz and Mr. Picard both expressed concern about quality standards. Each is responsible for grading peanuts delivered to their plants. Both noted that there are no official Canadian grades and that they are subject to conflict of interest allegations. The need for a grading system with independent graders was cited.

Discussion/Comment

In the production aspect of the industry, poor harvesting conditions and the lack of adequate equipment have proven crucial problems. Perfection of the once-over harvester has not yet been realized despite the fact that many industry participants believe it is the best method. The modified American system, if operated properly under good conditions has proven reliable. High equipment and labour costs for that system are prohibitive. Due to these concerns, one system cannot be recommended over another.

With regard to drying, bulk kilns appear to be the most economical for the majority of growers. The use of specialized U.S. equipment is a burdensome investment which does not provide substantial operating savings over bulk kilns.

While average farm yields for crop insurance would be appropriate and less contentious, it should be noted that this system could not be used effectively until harvesters are operating consistently. One change that should be considered is the average yield estimate. Crop Insurance estimates an average 2,500 lbs. per acre, the current 2,000 lb. average is therefore inappropriate.

Extension has an important role to play in the production of the crop given that research results have yet to be fully transferred to the farm. Good extension remains a key to the crop's future.

Finally, both shellers are over-capitalized and under-utilized. Both have major problems largely attributable to poor harvesting conditions and equipment. Cost estimates provided to the task force reveal that these problems are a major factor in the relatively high cost of Ontario peanuts.

Production Related Recommendations

- The peanut breeding program be maintained at its current level for at least five years.

- Agriculture Canada continue agronomic work in peanuts to increase yield and quality through work in pesticide screening, fertility, rotation and curing studies.

- Agriculture Canada blueprint plans for the once-over peanut harvester.

- A Peanut Crop Insurance Plan continue to be offered to growers as insurance against crop loss.

- The defined peanut extension effort (0.25 professional man years) be dropped and that peanut extension be covered by Plant Industry Branch staff in the same manner as any other minor specialty crop.

III MARKETING

Utilization

Peanuts are used in both edible and inedible form. Edible peanuts can be formulated into peanut butter, salted nuts, or confectionery products. Inedible peanuts are made into oil and meal products.

Peanut butter, which is mostly a North American product, is roughly 90% peanuts and 5% salt. About one half to three quarters of all edible peanuts consumed in Canada are in the form of peanut butter. Until 10 years ago, the Spanish type was preferred for peanut butter. Now, 90% of the peanuts used are of the Florunner variety. In addition, approximately 70% of these Runners are splits.

Second to peanut butter, the largest use of edible peanuts is salted. The nuts are simply shelled, roasted and salted to taste. The type of peanut for salting varies from small Spanish to large Virginia, but the preference, based on price is for a medium runner. Price is the key factor as most manufacturers note that there is no consistent relationship between size or type of peanut and the quality of salted nuts. Over half of the peanuts are the Florunner variety.

Confectionery or candy manufacturing is the third largest use for edible peanuts. The largest use of shelled peanuts for this purpose is in the manufacture of nut roll bars. Most varieties are suitable for candy but they must be graded to size depending on the candy.

Peanuts for edible purposes are also marketed in-shell. In-shell peanuts are largely seasonal and usually the larger Virginia or Jumbo Runner type are used. In-shell peanuts comprise less than 10% of the total edible peanut market.

The following table illustrates utilization of peanuts for edible purposes.

Table 1: Total Canadian Consumption, 1983

	Vol. (lbs.)	Percent
Further Processed (Peanut Butter, Candy)	95M	70%
Salted	31M	23%
In-shell	9M	7%
Total	135M	100%

In North America peanuts are grown mainly for the edible market whereas in other countries they are grown primarily for oil and meal. Peanut oil in North America is used primarily as a cooking and salad oil and small quantities are used in the manufacture of shortening and margarine. Because of quality, peanut oil usually commands a price premium over other competitive vegetable oils.

Quality

Ontario peanuts (Valencia type) have a suitable quality for the salted or in-shell retail market or for blending into peanut butter. In terms of taste, people involved in the industry feel it has a superior flavour. Processors have even said the Ontario nut can enhance the flavour of their product.

Regarding the major quality problem for peanuts over the world, aflatoxin, tests on Ontario peanuts have found negligible levels. This is probably due to the fact that Ontario temperatures during the fall harvest are too cool for the toxin to form.

There are however, some major quality problems. Due to the inadequacy of harvesting techniques developed to date, Ontario peanuts generally have far too high levels of trash (stones, dirt, etc.) to be given blanket clearance for further processing into peanut butter or confectionery products. Also, due to the precision required in harvesting with regard to timing and curing, some peanuts have been off-flavoured, discoloured or shrivelled.

Ontario peanuts have proven difficult to blanch for the confectionery trade. Blanching removes the skin from the kernel and is thus a major operation in the manufacture of both salted peanuts and peanut butter. This difficulty stems from lack of uniformity, foreign material and the requirement for equipment adjustment to accommodate small runs.

Market Demand and Structure

Peanuts are sold after shelling to the wholesale market as a commodity. There is no product identity. Purchase decisions are based on price, quality, and availability. There is some differentiation according to type - Runner, Runner split, Spanish, etc. There is little or no interest in buying Ontario peanuts on the wholesale market as a specialty crop.

Product differentiation or branding is created at the further processing stage. This includes peanut butter and snack food products. The leaders in the industry are large multinationals. They have established consumer brand followings and retail chain accounts. They deal in large quantities of consistent quality and have a well-developed national distribution system. They can charge premium prices.

The bulk of Canadian peanut consumption has been in further processed products (peanut butter, candy, Table 1). Peanut butter is also the dominant sector in shelled peanut products. In spite of the doubling in prices after the 1981 U.S. crop failure, demand has returned to pre-'81 levels. In Canada, there are five major processors. Although peanut butter demand is strong, only marginal increases in sales of 1% to 2% annually are foreseen.

The salted segment has performed poorly in Canadian and Ontario markets (Table 3). High prices as a result of the '81 crop failure in the U.S. have caused salted peanut sales drop off dramatically. The demand for these products has not returned. There has been a major decline in the premium segment while the cheaper bulk type products have increased in sales. Overall, the demand outlook for salted products is stagnant to declining. Other types of non-peanut snacks are taking market share (potato chips, etc.)

Table 2: Shelled Usage, 1983, Canada

	Percent
Peanut Butter	55%
Candy	22%
Salted Nuts	22%

Table 3: Total Sales - Salted Peanuts 1981-1983

	1981	1982	1983
		- $ million -	
Canada	38	37	35
Ontario	15	13	12.5

Source: A.C. Neilson Co. of Canada, survey.

Competition is intense among key participants in the salted snack food peanut business. This is represented at all retail peanut categories. Planter's holds a dominant share at about 40%. Others are strong in different segments: Johnson and Trophy in the middle market/large bags; and Hostess, Krispak in the snack packs. A new entrant would have difficulty taking any market share.

Discussions with Loblaws, who carried Picard peanuts last year, suggest that marketing opportunities may exist for in-shell and shelled salted roasted peanuts. The crop would have to be promoted as a high quality Ontario product in produce departments from mid-October to the end of December.

Discussion/Comment

Based on the evidence, it appears that for the foreseeable future, the best possibility for Ontario peanuts is to market them directly from the sheller to retail chain in a branded product form. Only through direct marketing could the product be differentiated as an Ontario peanut and perhaps compensate for the product's uncompetitive price.

In addition, as it appears that the in-shell product has the greatest mark-up, selling wholesale for 40-60¢/lb., it would therefore be advisable to market as many in-shell peanuts as possible. There are however two drawbacks to the in-shell market. One being that the market is small with only seven to ten thousand tons sold annually. The other is that the in-shell market would require that only the best looking peanuts could be taken for that market, perhaps one quarter of the crop. Nevertheless, most experts tend to agree that the pursuit of the in-shell market would be advisable.

Marketing Related Recommendation

. For the 1985 crop and beyond, only in-store posting cards be produced and that these be made available to individual sheller-processors.

IV. UNITED STATES SITUATION

The U.S. peanut situation and policy outlook play a crucial role in the viability of the Ontario crop. It is however worthwhile to note production trends in the rest of the world as well.

Off-Shore Sources

With the exception of the 1980-1981 U.S. crop, world peanut production from 1980 to 1984 has remained relatively stable with output totalling over 17 million tonnes (shelled). The largest peanut producer in the world is India with 1982-83 production of 5.5 million tonnes. China is the second largest producer (3.8 million tonnes) followed by a wide array of approximately 25 countries producing at least 50 thousand tonnes on a shelled basis.

Most countries produce peanuts for internal oil and meal consumption. Relatively few producing countries were considered significant or reliable sources for Canadian edible nut consumption prior to 1981. In 1981, the U.S. had a severe drought, cutting farm production drastically. Generally, as Canadian nut processors found their U.S. source of supply becoming scarce and prices rising, they sought other, off-shore sources. Today, as a result of market conditions in 1981, most peanut users in Canada have kept other sources of supply open. Besides the U.S., the most reliable suppliers have become Argentina and China.

Argentina began to supply Canadian processors in 1981 with a small Spanish type peanut. Since 1981, that country has adopted a Runner type to enable it to better penetrate the peanut butter market. The development of the Runner has also given the Argentines a strong boost in terms of yield per acre. Commercial farms in Argentina this year have yielded 3,000 lbs./acre. The Argentina peanut is regarded as safe (aflatoxin free), of good quality, and highly competitive. The Argentines generally set their price just under that of the U.S. Argentina exported 5,000 tons of peanuts to Canada in 1983 and reaction to the product was quite favourable. In 1984, 15,000 to 20,000 tons of Runners were available for export in addition to 50,000 tons of the Argentine Spanish.

Until the mid-1960's, China was the leading exporter of edible nut products in the world. During the late 1960's and early 1970's, due to political reasons, the Chinese virtually stopped exporting. Since 1981, probably due to the U.S. drought and a more commercial atmosphere in China, that country has again become a significant player in the edible nut market. The Chinese product is safe, of good quality, and as usual, at a price just below the U.S. The Chinese produce a wide variety of peanuts for most market niches.

India, although the world's largest producer, is viewed with concern by Canadian importers because of aflatoxin. As a result, that country is viewed as a 50/50 proposition as a supplier of edible nuts to Canada. South Africa produces a safe product, but because of drought in recent years, it has actually been an importer of nuts. On a year-to-year basis though, South Africa should be viewed as a

potential supplier. Brazil can also be viewed as a potential supplier but due to the aflatoxin threat, it is of relatively minor consideration. Manufacturers are also not interested in the Brazilian peanut due to the small size of the peanut.

Canada's major suppliers (besides the U.S.) produce comparatively low yields per acre. Each of those countries however, have such low costs per ton that they typically wait until the U.S. harvests its crop before they decide what price to set. Essentially, as in many crops, the world price is set by the U.S. and other countries adjust their prices accordingly in order to compete.

Since the disastrous 1981 crop in the U.S., three developments have occurred: Canadian nut processors have realized the importance of keeping alternative sources of supply open; off-shore countries have taken the opportunity to compete with the U.S. due to relatively high U.S. prices and the need to generate foreign exchange; and Canadian processors are now contracting for longer terms to ensure supply. Of the off-shore countries, China and Argentina are the most important.

Economics of U.S. Peanut Production

Almost 45,000 farm operators grew peanuts in the U.S. in 1980. Peanuts are a high value crop and contribute significantly to the income of most farmers who grow them (Table 4). According to the USDA, for 1984, net returns to owned inputs in the southeast (Georgia, Alabama, Florida) amount to $400 for peanuts, $40 for soybeans and $9 for cotton. Farm income from peanuts exceeds income from all other competitive crops by a wide margin.

Most U.S. production is concentrated in the southeast States (Table 5). Georgia is the overwhelming production leader. The U.S. normally produces approximately 10% of world peanut output. Since the 1950's, total acreage planted has changed relatively little, usually ranging from 1.3 million acres to 1.5 million. During those 30 years though, U.S. production has nearly doubled due to increased farm yields.

The cost of production in the U.S. is a crucial element in comparing the competitiveness or economic viability of the Ontario industry. The following table (Table 6, page 14) outlines the U.S. cost of production.

Production costs vary throughout the U.S. In the southeast states of Georgia, Alabama and Florida, the cost of production per acre was $437 per acre or $271 per ton. In Virginia and North Carolina, the cost of production per acre totalled $463 per acre or $319/ton (Table 6).

U.S. Peanut Program

The 1981 U.S. Farm Bill modified provisions of the peanut program that prevailed under the 1977 Farm Bill. The 1981 Act extended the quota allocations and the two two-tier pricing formula into 1985. Besides supporting the incomes of peanut farmers, the 1981 peanut program was designed to bring domestic edible nut production into line with market demand. The program altered the 1977 Act by some other important changes as far as the Ontario industry is concerned:

. Any farmer was allowed to grow peanuts whether he has a quota or not.

Table 4: Peanuts: Area, Yield, Production, Disposition, Season Average Price per Pound Received By Farmers, and Value, United States, 1968-1984

Crop of -	Area Planted	Area Harvested	Yield per Acre	Production[1]	Used on Farms Where Produced: For seed[2]	Feed and Lost	Household Use	Sold	Price	Value of Production
	- '000 acres -		- lbs.		- '000 pounds -				¢	$'000
1968	1,495.9	1,438.4	1,770	2,546,591	22,765	2,281	2,654	2,518,891	11.9	303,726
1969	1,512.1	1,455.7	1,742	2,535,394	22,107	1,922	2,581	2,508,784	12.3	312,358
1970	1,517.6	1,469.2	2,030	2,983,121	20,704	1,963	2,853	2,957,601	12.8	382,967
1971	1,528.9	1,454.5	2,066	3,005,118	18,848	1,830	2,753	2,981,687	13.6	408,371
1972	1,532.8	1,486.4	2,203	3,274,761	17,359	4,821[3]		3,252,581	14.5	475,367
1973	1,530.2	1,495.7	2,323	3,473,837	18,723	4,705		3,450,409	16.2	562,460
1974	1,519.6	1,472.1	2,491	3,667,604	24,398[4]			3,643,206	17.9	657,987
1975	1,531.9	1,500.0	2,564	3,846,722	26,668			3,820,054	19.6	754,491
1976	1,544.6	1,517.5	2,464	3,739,190	26,251			3,712,939	20.0	746,675
1977	1,540.6	1,512.4	2,456	3,715,055	25,231			3,689,824	21.0	780,869
1978	1,540.8	1,509.1	2,619	3,952,384	26,369			3,926,015	21.1	833,885
1979	1,545.9	1,519.7	2,611	3,968,485	26,297			3,942,188	20.6	819,276
1980	1,521.4	1,398.8	1,645	2,301,282	(5)			(5)	25.1	578,292
1981	1,514.0	1,488.7	2,675	3,981,850	(5)			(5)	26.9	1,609,526
1982[6]	1,309.4	1,275.4	2,696	3,548,330	(5)			(5)	24.9	856,095
1983	1,411.0	1,373.5	2,399	3,295,530						
1984	1,562.6	1,531.0	2,918	4,405,745						

1 Net weight basis.
2 Seed used for planting the crop of the following year.
3 Beginning 1972, not estimated separately.
4 Beginning 1974, not estimated separately.
5 Series discontinued.
6 Preliminary.

Source: Statistical Reporting Service, USDA.

- Production sold domestically for edible use is limited to quota peanuts only.
- Quotas for domestic production were cut back.
- Quota holders were allowed to grow peanuts beyond their quota allocation.

The peanuts grown beyond quota and those grown by non quota holders are called "additional peanuts". "Additional peanuts" are for the edible nut export trade or the domestic oil and meal market. These "additional peanuts" do not receive any significant price support.

Minimum poundage quota was reduced from 1.44 million tons in 1981 to 1.1 million in 1985 or 24%, thereby freeing more peanuts for "additional" production. Percentage reductions were shared equally among the States. Between farms though, quotas are reduced on the basis of three priority classifications. Listed from highest to lowest priority these are:

1. Quota holders who lack sufficient tillable crop land to produce the quota.
2. Farms with unused quota in previous years.
3. Quota leased out and grown on a farm other than the one to which quota is assigned.

Table 5: Production by State 1982

	Pounds
	'000
New Mexico	25,220
South Carolina	30,000
Florida	153,000
Oklahoma	174,580
Virginia	275,500
Texas	325,125
North Carolina	415,275
Alabama	522,150
Georgia	1,517,480
U.S.	3,438,330

Source: USDA.

Table 6: 1984 U.S. Peanut Production Costs*

Expenditure	U.S. Dollars/Acre
Materials	
Seed	71.01
Fertilizer	20.00
Lime	15.32
Chemicals	91.19
Total	**197.92**
Operations	
Custom Operations	7.50
Fuel/Lube	30.88
Repairs	20.41
Total	**58.79**
Drying	38.38
Total Variable	**295.09**
Fixed Costs	
General Overhead[1]	29.34
Taxes	12.32
Interest[2]	106.36
Total	**148.02**
Total Cost/Acre	**443.11**

* Preliminary.
1 Telephone, water, accounting etc.
2 Operating, land and machinery related interest.

Average yield per acre	2,918
Cost of production per ton	$303.70
Cost of production per pound	15.2¢

Source: USDA.
Note: USDA does not isolate harvest costs.

As noted, the peanut program contains a two-tier pricing format. Quota peanuts had a high support price of $550/ton or 27.5¢/lb. (farmer stock) in 1983 and 1984. Support prices for quota peanuts are tied to the cost of production. U.S. domestic processors of edible nut products must therefore pay at least the support price in order to obtain the required farmer stock. "Additional" or non-quota peanuts are supported relative to the USDA's estimate of the value of peanuts used for crushing in oil and meal. In 1983 and 1984 the support price for additional peanuts was $185/ton or 9.25¢/lb. Since the two price system came into effect in 1978, exports have outnumbered crushed peanuts by more than three to two. It appears the program has promoted exports at the expense of the domestic crushing industry.

The support price for additional peanuts is set such that there is no net cost to the government. Generally speaking, the program has been relatively successful in this regard. Annual costs of the program have been typically around $5 million. This success is largely attributed to the fact that the domestic supply and demand for quota peanuts have been in a fairly stable market balance while the market price for "additionals" has been far above $185 per ton ($300 to $375).

The peanut program is up for renewal, with the 1985 U.S. Farm Bill. The peanut program could take three possible forms:

1. Continue as the same program with gradual quota and price support reductions or freezes.

2. Free market with no quota or price support.

3. All quota peanuts and one high support price.

While many growers would like to have one high price for peanuts, the third option is highly unlikely. Not only would this program be expensive but it would also result in high priced exports, thereby encouraging producers in other countries to compete with the U.S.

The free market program was contained in the Reagan Administration's 1985 Farm Bill presented to Congress in early 1985. In a free market many inefficient producers would be forced out of business, especially those in the high plains of Texas and Oklahoma. If, however, a free market did evolve, lost production would be more than made up for by increases in production in efficient areas such as Georgia, Florida, Alabama, and West Texas. In terms of a pricing scenario, the free market proposal could drop prices to the cost of production by 1988 according to a study commissioned by the American Peanut Produce Manufacturers. As the price moved toward the cost (roughly $380/ton by 1988), producers would be forced out of business and production would stagnate. As this occurred, prices would begin rising marginally to around 22 or 23 cents per pound (or $450/ton) by the late 1980's. Even at a free market price, peanuts would still rank as the most attractive crop in the southeastern States.

The Reagan proposal has been largely rejected by Congress and stands little chance of passage.

The most likely scenario for the peanut program after the 1985 Farm Bill, is that the program will continue as it currently exists with gradual quota reductions. The quota support price can also be expected to be frozen at or below the 1984 level of $550/ton.

Discussion/Comment

In summary, the U.S. peanut program provides a price support for quota peanuts for domestic edible consumption. This price support provides income protection for quota holders. Peanuts grown beyond are essentially not protected and are priced at whatever the market will bear. In essence, as all other countries price according to U.S. "additionals", these peanuts set the world market umbrella.

It is risky at best to attempt to predict the outcome of the 1985 U.S. Farm Bill. At the same time, however, producers over the world are highly dependent upon which course the Farm Bill will take.

Also, it would be unwise to assume that U.S. producers will switch out of peanuts as the market becomes more competitive. Since 1977, when quotas were first reduced, profitable "additional" returns have resulted in little switching of peanut acreage to alternative crops. Even if all peanuts were priced at projected free market prices, there are few crops that could compete in profitability in the southeast. It should be assumed that a freer market will result in a more efficient, rational and therefore more cost competitive U.S. peanut industry.

U.S. Peanuts Landed - Canadian Price

Ontario peanut farmers face very stiff competition. From a farmer stock product that costs less than 17¢/lb. to produce ($350/ton), the following pricing structure develops on a shelled basis:

Runner splits - late February 1985	23.00¢ - FOB Sheller
Freight to Toronto	2.65¢
36% Exchange	9.23¢
Total	**34.88¢/lb.**

Runner splits are the peanuts that Canadian producers must compete with in the peanut butter market since 70% of that product is splits. In addition, peanut butter processors would have less trouble blending our small Valencia with the Runner splits.

Prices for the last two years have been on the lower end of the scale since 1978 mainly due to large plantings in 1984 and 1985. This of course does not mean that 34.88¢/lb. is not a realistic price, but it is a price whereby U.S. shellers are squeezed or losing money on their "additional" stock. A price that Ontario producers could conceivably see for this commodity would be 38.88¢ (Cdn.) or 4¢/lb. more (assuming that farm stock costs the U.S. sheller $375/ton (U.S.)). Table 7 outlines current prices for various types of peanuts and an accompanying price that is 4¢ more than the current.

Ontario peanuts for peanut butter would have to compete with runner splits. Peanuts for the salted category would have to compete with medium runners. Jumbo runners are imported mainly for their larger size.

Table 7: Current and Normal Prices for Landed Product in Canadian Dollars at 30% Exchange Rate

	CURRENT PRICE (February 1985)	NORMAL PRICE
	- cents -	
Runner Splits	34.88	38.88
Medium Runners	41.35	45.35
Jumbo Runners	47.25	51.25

V. ECONOMICS OF ONTARIO PRODUCTION

An economic justification for Ontario farmers north of Lake Erie growing peanuts is that they are concerned that their future in tobacco is jeopardized by declining cigarette consumption. Farmers therefore are seeking alternative crops and peanuts are considered a possibility. In the Delhi-Simcoe area, few crops compare to tobacco with regard to returns per acre. Nevertheless, there are plenty of alternative crops that can be grown (Table 8).

Besides the noted crops in Table 8, others such as asparagus, beans, broccoli, celery, etc. can be grown in that area. With 1984 imports of vegetables into Ontario of $303,008,000, the implications are that there exists plenty of potential for import replacement. Grains such as rye, winter wheat, corn and soybeans can also be grown on the sandy soils.

In short, almost any crop that can be grown in Ontario can be grown in the Delhi-Simcoe area. With irrigation, there is no shortage of alternative crops.

Yield

Peanuts have been grown in Ontario on experimental plots and commercial farms for nearly 10 years. Experimental plot yields at the Delhi Research Station for various crosses of the Valencia type peanuts have been in the range of 2,400 to over 4,900 lbs./acre. The seven-year average yield of peanut cultivars at Delhi through 1983 is 2,950 lbs./acre. Ignoring the low 1982 yields which were due to early frost, average yields from Delhi would be just over 3,000 lbs./acre (3,087 lbs.). Commercial growers usually receive yields of 800 to 1,000 lbs. less than the research plots. Reasons for the poorer commercial yields may be attributable to lack of experience, but a number of other reasons have also been cited.

Generally, Ontario yields do compare reasonably well with the Southwest U.S. which is where the Spanish and Valencia types are mainly produced. Ontario yields are also comparable to Virginia types grown in North Carolina and Virginia (Table 9). Ontario producers however, are not only competing with Southwest growers. For the most part, Ontario producers are competing with growers in Georgia, Alabama and Florida, who produce the high-yielding runner type. Therefore, Ontario producers are far from competitive with their primary U.S. counterparts in terms of yield.

Table 8: Projected Costs and Returns for Crops in Brant, Elgin, Haldimand-Norfolk, Middlesex and Oxford, 1983

	Gross Returns	All Costs	Returns to Management & Risk
		- $/acre -	
Tobacco	3,504.50	2,955.49	549.01
Processing Tomatoes			
Machine Harvest	2,166.00	1,729.00	437.00
Hand Harvest	2,166.00	1,954.00	212.00
Carrots	2,750.00	2,050.00	700.00
Onions	2,812.00	1,888.00	929.00
Cauliflower	3,059.00	2,491.00	568.00
Fresh Market			
Tomatoes	5,010.00	4,858.00	152.00
Peppers	1,789.00	1,579.00	210.00
Cabbage	2,837.00	2,233.00	604.00
Potatoes	1,260.00	910.00	350.00
Apples Standard			
Trees	n/a	1,431.00	n/a
Strawberries (Norfolk)	n/a	1,388.00	n/a

Source: Economics and Policy Coordination Branch, OMAF.

Table 9: Comparison of U.S. and Ontario Yields

Maximum U.S. Yield	6,416	lbs./acre
Maximum Ontario Yield (Research)	4,900	
Upper Range Commercial U.S.	5,000	plus
Upper Range Commercial Ontario	2,600	
U.S. Average	2,918	(1984)
Ontario Average	1,883*	(1984)

* After significant harvest loss.

If the new Ontario variety does develop as researchers believe it will, by 1985, it is conceivable that Ontario farmers could realize yields near the U.S. average. This assumes though that there is adequate harvesting machinery available in Ontario to retrieve the peanuts.

Acreage

In 1983, the 20 farmers who grew peanuts planted approximately 550 acres. In 1984 there was similar acreage with roughly the same number of growers. Some growers dropped out while others moved in. By 1985, there were only 5 growers with about 200 acres.

Cost of Production

In effort to obtain grower cost for the 1984 crop, on-farm interviews with nine peanut producers were held on a person to person basis. The growers' 1984 budget which follows represents the cost per acre of each input averaged over the surveyed growers (Table 10).

The cost of washing the peanuts may also be a factor since the current once-over harvester produces a peanut with too much dirt. The farmer will have to wash the peanut himself or have it done for him. It can be assumed that washing costs may be around 2¢/lb. At 2¢/lb., this would increase total costs by $40/ton. It must be realistically assumed that dirt, with the once-over harvester will always be a problem.

Therefore, given the fact that Ontario growers attained yields of approximately 1,900 lbs./acre in 1984, costs per ton are about $659. This compares to U.S. costs of $304 (U.S.) or $420 (Cdn.) assuming a 38% exchange rate. Ontario producers are not remotely competitive with their U.S. counterparts. In addition it is worthwhile to note that the Ontario costs are under the assumption that there is little or no difficulty regarding climate during the harvesting season. Growers who harvest too late or under difficult conditions will find yields drop while damaged nuts and costs per acre increase.

Finally, the risk of this crop from an agronomic point of view is quite similar to or better than that of other crops. The coefficient of variation is about 23% which compares favourably with other crops. From an economic or financial viewpoint, however, the risk of this crop is quite large. The Delhi Research Station estimates of mean yearly pod weights for peanut cultivars over a period of seven years, shows a standard deviation of 650 lbs./acre. If the disastrous 1982 crop is excluded from consideration, the standard deviation of the crop is 600 lbs./acre. If growers are paid 35¢/lb., as they currently are, this 600 lb. deviation will translate into a $210/acre revenue deviation. While this would be rewarding on the positive side, it would prove devastating on the downward side.

Table 10: Ontario Peanut Budget 1984

	$/acre		
Materials			
Seed	98.36		
Inoculate	9.61		
Fertilizer	-		
Herbicide	53.21		
Insecticide	18.68		
Total	179.86		
Field Operations			
Plowing	11.64		
Secondary Tillage	7.81		
Incorporation	11.82		
Planting	15.19		
Fertilizing	-		
Row Cultivation	6.83		
Spraying	15.25		
Total	68.54		
Harvesting/Drying/Hardline	(Wagons)		(Kilns)
Harvesting	149.31		149.31
Curing (natural gas fuel)	150.00		121.67
Unloading	-		40.00
Trucking	4.97		4.97
Total	304.28		315.95
Other Costs			
Crop Insurance			27.84
Interest on Operating Capital			19.28
Miscellaneous			15.00
Total			62.12
Total Costs	614.80	or	626.47
Average Cost			620.64/acre
1984 Yield			1,883 lbs./acre
Cost/ton			659.20/ton

Source: OMAF, Plant Industry Branch.

Shelling

The cost of shelling Ontario peanuts has proven to be quite difficult to ascertain due to the lack of data in the area. According to one sheller, his cost per pound is just over 70¢ for bagged raw stock. This cost is extremely high and reflects the losses due to running a sheller at under 10% of its capacity. For the purpose of analyzing long-term viability, shellings costs of 35¢ to 40¢ would be more instructive to assume. Shelling costs of 35¢ which is half the current estimate would not significantly improve the competitiveness of the Ontario peanut. Costs of 35¢/lb. are still very high by U.S. standards.

The Price of Ontario Peanuts

The price of farmer stock in-shell peanuts was either 35¢/lb or 50¢/lb in 1983 and 1984 depending upon the sheller contractor. One sheller says he must pay $1,000/ton to encourage farmers to plant peanuts. Many farmers said they would have to receive a $150 margin per acre to enter the business. These prices are extremely high considering U.S. farmers receive $375 (U.S.)/ton or 18¢/lb. or less for their "additionals".

Prices charged by the shellers to peanut butter processors and retail chains have ranged from approximately 65¢ to well over $1.00 per pound. At these prices both have stated that they have experienced losses. In fact, whether for peanut butter or salted nuts, these prices are extremely out of line with the market.

In order to consider what a realistic price of shelled Ontario peanuts could be presently, a base price of 35¢/lb. should be added to the shelling costs (appropriately trimmed). This would put the final, current price of Ontario peanuts on a bagged, raw-stock, shelled basis at about 65¢/lb. This price is approximately 30¢ to 35¢/lb. higher than the current landed Toronto price.

Future Scenarios

Looking ahead to the development of a new, high-yielding variety and assuming the ability to harvest is obtained, the following scenario could develop.

Potential Harvested Yield	2,600 lbs./acre
Costs	$621/acre or $478/ton

Price per ton payable to grower could be $593 to enable a $150 return per acre or $4,500/year on 30 acres. (Most of producers felt that a $150 return per acre was necessary to entice them to grow peanuts.)

At $593/ton or 29.7¢/lb. and assuming a 30¢ shelling cost, this would price Ontario peanuts at 60¢ raw stock per pound or 15-25¢ more expensive than the landed product (taking into consideration both the current landed price and a price which is 4¢/lb. greater).

If costs can decline by $100/acre and if harvested yields do reach 2,600 lbs the following scenario could also develop.

Harvesting Yield	2,600 lbs./acre
Costs	$521 (621-100) or $401/ton

Price per ton payable could then be $516 to enable a $150 return per acre.

At $516/ton or 26¢/lb. farmers' stock and assuming a 30¢ shelling cost, Ontario peanuts would cost 56¢ or 10-20¢ more per pound than landed stock.

The following tables provide another way of viewing the future potential. The tables use costs of production per acre which are very low and as yet unattained, to incorporate two optimistic scenarios. The tables can then be used to estimate possible yield and pricing break-even possibilities.

Table 11 is prepared on the basis of a producer cost of $490/acre. This cost is equal to the price (Cdn $) that farmers in the U.S. are prepared to grow additional peanuts.

The table demonstrates that if farmers are paid 35¢ per pound by the sheller, (as they currently are) they need only 1,400 lbs. harvested yield to break even at $490 per acre. The total cost of the shelled product however would still be over $1.00 per pound which is very uncompetitive. If farmers were paid 20¢/lb. which is probably a more realistic price, they would need a 2,450 lb. harvested yield to break even. The total cost of the final product would still be an uncompetitive 82¢/lb.

In Table 11, the farmer must receive a minimum of 25¢/lb. to break-even at current yields (1,960 lbs.) before a return to management and risk. At the 25¢ return to the farmer, peanuts must be sold to the final processor at 82¢ to 88¢/lb. This is 40-45¢ above the price of U.S. imports.

Table 12 illustrates the cost and break-even of production if production cost is increased up to $600/acre.

From Table 12, in the shelled peanut case, at present yields (2,000 lbs) , the cost of nuts to the final processor would be 95.4¢/lb. at a farmer break-even of 30¢ per pound, again, very uncompetitive with imports.

Table 12 also includes an in-shell cost of production. Under this scenario the farmer break-even price would be 30¢ of current yields (2,000 lbs.). This translates into a bulk price to the chain store of 92¢/lb. This would appear to be a competitive price at which to sell Ontario nuts. However, Mr. Picard has indicated that quality in-shell peanuts are very difficult to produce, store, and maintain in a fresh condition. It was also observed that in-shell nuts produced in Ontario are subject to discoloration, etc., due to the conditions under which they must be harvested. There are indications in the market that the demand and high price for in-shell product reflects this high risk. An additional observation is that the present nut grown in Ontario is not the most desirable or attractive for the in-shell trade.

It is evident from the tables and the future scenarios that the Ontario produced peanut, even under extremely conservative cost estimates and yields that have not yet been achieved, will not be able to compete with imported product. It is also the case that there is no evidence that import prices will increase and good reason to believe they may even drop in price. The only conclusion is that Ontario peanuts are not competitive in the long run.

Table 11: Break-Even Production Levels @ $490/Acre

Price to Farmer ¢/lb.	In-Field Yield lbs./Ac	Harvested Yield/Lbs 15% Loss	Shell-Out Cost @ 38% Loss	Processing Cost 42¢	Selling Cost 12¢	Total Cost	Total Cost @ 6¢ Selling
10	5,635	4,900	13.8	55.8	67.8	67.8	61.8
15	3,756	3,266	20.7	62.7	74.7	74.7	68.7
20	2,817	2,450	27.6	69.6	81.6	81.6	75.6
25	2,254	1,960	34.5	76.5	88.5	88.5	82.5
30	1,877	1,633	41.4	83.4	95.4	95.4	89.4
35	1,610	1,400	48.3	90.3	102.3	102.3	96.3
40	1,408	1,225	55.2	97.2	109.2	109.2	103.2
45	1,251	1,088	62.1	104.1	116.1	116.1	110.1
50	1,127	980	69.0	111.0	123.0	123.0	118.0
55	1,023	890	75.9	117.9	129.0	129.0	123.9

Note: Costs are based on financial information, provided by a sheller for processing peanuts.

Assumed:

1. Plant operating at 5,000 ton capacity.
2. 38% loss to sheller. Will realize a No. 1 grade price for all nuts processed.
3. Hand grading cost; to 4¢/lb.
4. Term payments; to 9¢/lb.
5. Overhead; to 2¢/lb.
6. Selling cost i.e. packaging and shipping is 12¢/lb. Transportation direct to processor from plant may reduce selling cost to 6¢/lb.

Harvested yields are based on the estimate of field loss experience under climatic conditions in Ontario. Sheller cost, processing and selling are based on a substantial reduction of costs provided to the Task Force, these costs should be increased by at least 30% to reflect current costs. It is also assumed that the 62% yield from farm-delivered product will all grade out top quality product with waste residual sold to provide an equal return to the sheller.

Table 12: Break-Even Production Levels @ $600/Acre - 2,000 lb/acre

Price to Farmer ¢/lb.	In-Field Yield lbs./acre	Harvested Yield/lbs. 15% Loss	Sheller Cost @ 38% Loss	Processing Cost 42¢	Selling Cost @ 12¢	Selling Cost 6¢
			Roasted & Salted			
10	6,900	6,000	13.8	55.8	67	61.8.8
15	4,600	4,000	20.7	62.7	74	68.7.7
20	3,450	3,000	27.6	69.6	81	75.6.6
25	2,760	2,400	34.5	76.5	86	82.5.5
30	2,300	2,000	41.4	83.4	95	89.4.4
35	1,971	1,714	48.3	90.3	102	96.3.3
40	1,183	1,029	55.2	97.2	108	102.2.2
45	1,533	1,333	62.1	164.1	116	110.1.1
50	1,380	1,200	69.0	111.0	123	117.0.0
55	1,254	1,090	75.9	117.9	129	123.9.9
60	1,150	1,000	82.8	124.8	136	130.8.8
			In-Shell Peanuts			
		40% Loss		32¢		
10	6,900	6,000	16[a]	48[b]	60	54
15	4,600	4,000	24	56	68	62
20	3,450	3,000	32	64	76	70
25	2,760	2,400	40	72	84	78
30	2,300	2,000	48	80	92	86
35	1,971	1,714	56	88	100	94
40	1,183	1,029	64	96	108	102
45	1,533	1,333	72	104	116	110
50	1,380	1,200	80	112	124	118

Assumed:

1. Plant operating at 5,000 ton capacity.
2. 38% loss to sheller. Will realize a No. 1 grade price for all nuts processed.
3. Hand grading cost: 4¢/lb.
4. Term payments; to 9¢/lb.
5. Overhead; 2¢/lb.
6. Selling cost i.e. packaging and shipping is 12¢/lb. Transportation direct to processor from plant may reduce selling cost to 6¢/lb.

a 60% loss
b 32¢/lb.

VI. CONCLUSIONS

The task force has come to certain fundamental conclusions which directly relate to the industry's viability. Among them:

- Production gains in both yields and costs were again elusive in 1984. Problem such as harvesting and drying that have been detrimental to the industry since its inception continue to be a negative force on competitiveness and viability.

- Research remains one of the few successes in the industry and adoption of research technology remains as a possibility for the future. The research component of the program will continue to contribute a great deal to the progress of the industry.

- Shelling and processing costs remain obstructively high and there is little indication that necessary economies can be gained in this area.

- Due to high production, shelling and marketing costs, in addition to some quality problems, significant marketing gains have not been made and are not expected.

- The possibility of marketing Ontario peanuts on a large scale through one or more of the major chains on a continuing basis is remote without the infusion of large advertising subsidies and a competitive price. However, specialty and local confectionery markets will continue to exist.

Due to these and other factors, the Task Force believes that the Ontario peanut industry is currently not viable.

Low commercial yields, high harvest losses, and high curing and shelling costs are all contributing to Ontario's inability to compete. Until research yields are transferred to commercial plantings, until efficient harvesting systems are developed and adopted and until shellers reach some reasonable economies of scale, the Ontario industry will not compete with U.S. imports.

Research results show markedly increased yield potential and harvesting systems with the ability to efficiently and reliably harvest the crop. Adoption of this technology has been slow and to date ineffective. Conflicts within the industry and inexperienced management have contributed a great deal to the inefficiencies and slow adoption rate.

Peanuts will continue to be grown in Ontario as a cottage industry. With time, current and future technology will be adopted by growers and should gradually improve the competitiveness of an Ontario grown product.

As such, due to the industry's current non-viability, there is little justification for granting commercial financial support, but the research programs should not be terminated. The industry will continue with or without government financial support, therefore research and support programs should be continued for at least five years at which time further review will be required.

APPENDIX A

Individuals; Groups; Organizations making representation to the Task Force:

Growers:	Ontario Peanut Growers' Association Burns Stephen, President Nancy Racz, 1st Vice-President Jim Picard Jr., 2nd Vice-President.
Harvesting:	Tobac Curing Systems Robert Boswell, President 1 Avenue West, Simcoe.
	G. & C. Berchard Ltd., Ernst Gugeler, Box 28, Straffordville.
	Bert Sonnenberg R.R. # 3, Waterford.
	Peter White Agriculture Canada Delhi.
Crop Insurance:	Larry Scanlon, Area Manager Crop Insurance & Stabilization Branch Ont. Ministry of Agriculture & Food.
Research:	Bob Roy, Agriculture Canada, Delhi - Agronomy.
	Dr. Tom Michaels, Crop Science Dept., University of Guelph - Breeding.
Shellers:	Picard Peanuts Ltd., R.R. # 1, Windham Centre.
	Kernal Peanuts Ltd., R.R. # 1, Vittoria.
Dealers & Brokers:	Dwight Dehne Nutco Limited Toronto.
	Tim Reid T.H. Reid Brokerage Incorporated Toronto.

Processors:	Adrian Barker Bowes & Co. (President, Edible Nut Processors Assoc.).
	Doug Ross Canada Packers/York.
	Peter Barr Krispak
	Bob Swain Canada Starch/Skippy.
Marketing:	Derek Ruston (consultant to Market Development Branch) Peter Barnard Associate 111 Elizabeth St., 5th Floor Toronto.
Retailers:	Bill Binder Loblaws 6363 Millcreek Drive Mississauga, Ontario.
Economics:	Dr. Peter Stonehouse School of Ag. Economics & Ext. Ed. University of Guelph.
	Dr. Jack Clark School of Ag. Economics & Ext. Ed. University of Guelph.
U.S. Perspective:	Dr. Duane Hacklander U.S.D.A., Washington.
	Chris Bickers Raleigh, North Carolina (freelance journalist, former editor The Peanut Farmer magazine).